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Avenu Medical

recognized by **MEDTECH** magazine as
OUTLOOK

TOP 10
NEPHROLOGY
SOLUTION PROVIDERS - 2019

*An annual listing of 10 companies that are at the
forefront of tackling customer challenges*

COMPANY:

Avenu Medical

WEBSITE:

avenumedical.com

KEY PERSON:

Ed L. Chang
Vice President, Director, &
Co-Founder
Mark A. Ritchart, President,
Director & Co-founder

DESCRIPTION:

The Ellipsys is a groundbreaking, minimally invasive and cost effective method to create a percutaneous arteriovenous fistula for hemodialysis access in patients with End-Stage Renal Disease

TOP 10 NEPHROLOGY SOLUTION PROVIDERS - 2019

In 1954, John P. Merrill and Joseph Murray performed a kidney transplant between two identical twins and introduced nephrology into the modern age. The surgery implants a new functioning kidney into a patient who had an irreversible loss of organ function. Over the next decade, Peter Medawar, a British biologist led the discovery of immunosuppressive drugs in the field of nephrology. In the 1960s, clinicians began to implement hemodialysis for patients who had end-stage kidney disease on the grounds of the work done by early physicians and biologists.

Today, the evolution in nephrology has reached an all-new level with revolutionary techniques such as the creation of artificial kidneys. Stem cell technology in which the human cells can regenerate the kidney is being researched. When it comes to surgical equipment, Laparoscopic Nephrectomy is gaining ground in the nephrology space. It is a safe minimal invasive surgical method and helps in the removal of the diseased kidney. The surgery as compared to large incision, which requires traditional open surgery provides good results to patients. Laparoscopic Nephrectomy has benefits such as earlier return to work, a shorter hospital stay and easier return to daily activities.

Today, nephrology solution providers are dedicated to developing new drugs, devices, and biologics to improve millions of lives affected by kidney diseases. However, choosing the right solutions provider out of the myriad of players in the market often creates a problem for hospitals and medical institutions. In a bid to assist, various top-level decision-makers to identify and choose most advanced companies in the nephrology space, the editorial board of Medtech Outlook has selected a handful of leading nephrology solution providers. We have considered the vendor's ability in delivering solutions, keeping in mind, the factors like the expertise in the domain, skills, competencies, and the impact of their solutions.

We present to you Medtech Outlook's "Top 10 Nephrology Solution Providers - 2019."

Avenu Medical

A New Avenue in Hemodialysis Industry

A recent survey conducted in the United States shows that around 660,000 people are suffering from kidney failure. Of these, nearly 500,000 people are on dialysis. This coupled with an 8 percent increase in the number of hemodialysis patients every year worldwide, it is high time that a revolutionary change takes place. Hemodialysis, being one of the more complicated procedures in medicine, requires creating an arteriovenous fistula (or AVF), to surgically connect a primary vein and artery within the arm. This natural fusion or anastomosis created by joining artery and vein was considered the “gold standard” over synthetic anastomosis grafts due to its longevity and superior blood flow. However, is it an effective method for a uniquely complex population?

No. It is not. Unfortunately, dialysis access surgery has not evolved significantly in the last few decades. Clinical research shows that while 50 percent of AVF is not usable for hemodialysis, 25 percent of AVFs fail within two years. Thus to revive the AVF, the patient may undergo another surgery or opt for other procedures for maintaining the AVF, suffering further surgical trauma and discomfort, over an even lengthier recovery time.

The answer then, comes from recent advances in technologies related to vascular access. The ability to create fistulas with percutaneous technique has the potential to be one of the most remarkable advancements in dialysis access. “We as a company, challenge, compare and contrast the existing problems and methods relating to vascular access” quotes Mark A. Ritchart, President of Avenu Medical. Avenu is a well-established medical company dedicated to creating a seismic shift in the hemodialysis industry. Ellipsys®, Avenu’s flagship product, is a game-changer in this domain. Ellipsys is a guidewire-based, single catheter system used to create and maintain percutaneous fistulas. In other words, Ellipsys is a less invasive and non-surgical alternative to the traditional surgical method of creating an AV fistula which has not changed since the last 50 years.

Ellipsys is a truly revolutionary device in the dialysis sector as it offers a minimally invasive and non-surgical method of creating a fistula. Using a percutaneous approach, Ellipsys uses a needle puncture, replacing the traditional incision methods and augments it with ultrasound imaging, replacing



Mark A. Ritchart

surgical dissection and tissue fusion to replace sutures. The FDA approved Ellipsys catheter uses a small amount of thermal resistance energy to establish a connection between artery and vein, and fuses them without any suture. It provides better vascular access than the conventional method, reducing the pain and suffering associated with fistula creation. Unlike surgery, Ellipsys is a straightforward method, which uses minimally invasive and endovascular techniques without leaving any scar or collateral damage to nearby vessels. This procedure takes less time to perform than the surgical method and the patient can leave the hospital or ambulatory surgery center the same day with just a band-aid. This is in stark contrast to the surgical method, which takes anywhere between 4 to 6 months to become mature and operational. With the fistula created by percutaneous approach, studies have shown it maturing and becoming functional in as little as 35 days.



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With an amazing success rate, Ellipsys not only makes the whole process simpler and faster but also cost advantageous when compared to the traditional AVFs associated with high failure rates, high patency, and extremely high infection rates.

After achieving milestones like FDA approval and receiving a reimbursement code from CMS, Avenu Medical is all set to take the next big leap in the area of vascular access. Talking about future endeavors, Mark quotes “any place where a vessel can be connected is a potential market for the company.” The company is currently studying other possible places on the arm such as the forearm and wrist, where fistulas can be created, which in turn can be beneficial for even a larger group of patients. Walking a noble pathway, Avenu not only believes in long-term success but also aims at improving the quality of healthcare being provided to people. 